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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,590	11/24/2003	Satoshi Kinoshita	8022-1065	1695
466 7590 12/28/2007 YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			EXAMINER BOKHARI, SYED M	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/718,590		KINOSHITA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Syed Bokhari		2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 2-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-8 and 10-14 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/01/2007, 11/01/2007and 06/12/2007.

Art Unit: 2616

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant amendment filed on October 10<sup>th</sup>, 2007 has been entered. Claims 10 and 12-13 have been amended. Claims 1 and 9 have been cancelled. Claims 2-8 and 10-14 are still pending in the application.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2, 4-5, 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fant et al. (US 2004/0076151 A1) in view of Banks et al. (USP 7,239,641 B1).

Fant et al. discloses a communication system for connection identifiers and restoration in optical networks with the following features: claim 2, A GMPLS controller comprising: (Fig. 1, optical network using a linear topology, see "GMPLS controllers coupled to control plane" recited in paragraph 0023 lines 9-10), a plurality of switch controllers controlling a plurality of switch devices, respectively (Fig. 1, optical network using a linear topology, see "controller is coupled to the switch" recited in paragraph 0023 lines 10-12 and 0025 lines 1-2), each of the plurality of switch devices including at least one port (Fig. 1, optical network using a linear topology, see "an interface to the optical switch" recited in paragraph 0023 lines 10-14 and paragraph 0009 lines 1-9), a resource manager responsive to a label request indicative of a target port selected out of the ports for managing labels, and for issuing a device setup request (Fig. 1, optical network using a linear topology, see "on obtaining a connection setup request" recited in paragraph 0025 lines 5-9), provides the device setup request for the target switch controller (Fig. 1, optical network using a linear topology, see "controller forwards the path message" recited in paragraph 0025 lines 9-11), and wherein the target switch

Art Unit: 2616

controller updates a setup of the switch device associated with the target switch controller (Fig. 1, optical network using a linear topology, see "controller configures its corresponding switch" recited in paragraph 0025 lines 9-14); regarding claim 4, further comprising at least one port-to-port connection controller for (Fig. 1, optical network using a linear topology, see "signaling is used between the GMPLS controllers over control planes" recited in paragraph 0023 lines 10-12 and 0025 lines 1-2), achieving a port-to-port connection between two out of the plurality of switch devices, wherein the port information table describes an association of the ports to the at least one port-to-port connection controller (Fig. 4, switch routing table, see "each port information associated with a RAM address in the routing table" recited in column 9 lines 43-67 and column 10 lines 1-5), wherein the resource manager is responsive to a port-to-port connection request indicative of another target port selected out of the ports for managing the labels, and for issuing another device setup request (Fig. 1, optical network using a linear topology, see "on obtaining a connection setup request" recited in paragraph 0025 lines 5-9), wherein the resource manager consults the port information table to determine a target port-to-port connection controller associated with the another target port out of at least one port-to-port connection controller (Fig. 8, process performed by the switch, see small switch 842 determines whether the port on which data frame will be output is an external port" recited in column 16 lines 6-22 and lines 65-67 and column 17 lines 1-6) and provides the another device setup request for the target port-to-port connection controller (Fig. 1, optical network using a linear topology, see "controller forwards the path message" recited in paragraph 0025 lines 9-11);

Art Unit: 2616

regarding claim 5, wherein the plurality of switch controllers include interfaces, respectively, and the interfaces uses a same protocol to receive the device setup request (Fig. 1, optical network cloud that is built using a linear topology, see “GMPLS controllers coupled to control plane” recited in paragraph 0023 lines 9-22); regarding claim 7, wherein the resource manager manages bandwidth information of the GMPLS network (Fig. 1, optical network cloud that is built using a linear topology, see “provides high capacity by using optical switching devices” recited in paragraph 0002 lines 1-13 in background) and regarding claim 14, a method for controlling switch devices provided for a GMPLS network, comprising providing a GMPLS controller including (Fig. 1, optical network using a linear topology, see “GMPLS controllers coupled to switch matrix” recited in paragraph 0023 lines 9-10) a plurality of switch controllers controlling a plurality of switch devices, respectively (Fig. 1, optical network using a linear topology, see “signaling is used between the GMPLS controllers over control planes” recited in paragraph 0023 lines 10-12 and 0025 lines 1-2), each of the plurality of switch devices including at least one port (Fig. 1, optical network using a linear topology, see “an interface to the optical switch” recited in paragraph 0023 lines 10-14 and paragraph 0009 lines 1-9), providing a device setup request for the target switch controller (Fig. 1, optical network using a linear topology, see “controller forwards the path message” recited in paragraph 0025 lines 9-11), and updating a setup of the switch device associated with the target switch controller in response to the device setup request (Fig. 1, optical network using a linear topology, see “controller configures its corresponding switch” recited in paragraph 0025 lines 9-14).

Fant et al. does not disclose the following features: regarding claim 2, a port information table describing an association of the ports to the plurality of switch controllers and wherein the resource manager consults the port information table to determine a target switch controller associated with the target port out of the plurality of switch controllers and regarding claim 14, a port information table describing an association of the ports to the plurality of switch controllers and consulting the port information table to determine a target switch controller associated with the target port out of the plurality of switch controllers.

Banks et al. discloses a communication system for quality of service using virtual channel translation with the following features: regarding claim 2, a port information table describing an association of the ports to the plurality of switch controllers (Fig. 4, switch routing table, see "each port information associated with a RAM address in the routing table" recited in column 9 lines 43-67 and column 10 lines 1-5) and wherein the resource manager consults the port information table to determine a target switch controller associated with the target port out of the plurality of switch controllers (Fig. 8, process performed by the switch, see small switch 842 determines whether the port on which data frame will be output is an external port" recited in column 16 lines 6-22 and lines 65-67 and column 17 lines 1-6); regarding claim 14, a port information table describing an association of the ports to the plurality of switch controllers (Fig. 4, switch routing table, see "each port information associated with a RAM address in the routing table" recited in column 9 lines 43-67 and column 10 lines 1-5) and consulting the port information table to determine a target switch controller associated with the target port

Art Unit: 2616

out of the plurality of switch controllers (Fig. 8, process performed by the switch, see small switch 842 determines whether the port on which data frame will be output is an external port" recited in column 16 lines 6-22 and lines 65-67 and column 17 lines 1-6).

It would have been obvious to one of ordinary skill in the art at the time of Invention to modify the system of Fant et al. by using the features, as taught by Banks et al., in order to provide a port information table describing an association of the ports to the plurality of switch controllers and the resource manager to determine a target switch controller associated with the target port out of the plurality of switch controllers. The motivation is to enhance the functionality of the system in a cost effective manner.

6. Claims 3, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fant et al. (US 2004/0076151 A1) in view of Banks et al. (USP 7,239,641 B1) as applied to claim 2 above, and further in view of Nomura et al. (US 7,133,402 B2)..

Fant et al. and Banks et al. describe the claimed limitations as discussed in paragraph 5 above. Fant et al. and Banks et al. do not disclose the following features: regarding claim 3, further comprising: a label database describing whether each of the labels is in use or not, wherein the label request is indicative of a target label, and wherein the resource manager updates the label database to indicate that the target label is in use; regarding claim 6, the plurality of switch devices include at least two out of an MPLS switch, a TDM switch, a Lambda switch, and a fiber switch and regarding claim 8, wherein the resource manager manages LSP information of the GMPLS network.

Nomura et al. discloses a link identifier assignment system in connection-oriented communication network with the following features: regarding claim 3, a label database describing whether each of the labels is in use or not (Fig. 2, label assignment module 100, see "process of reflecting this entry in the label assignment table" recited in column 19 lines 17-25); wherein the label request is indicative of a target label (Fig. 2, label assignment module 100, see "assigning the same label value to the establishing target connection" recited in column 17 lines 22-27 and column 16 lines 58-64) and wherein the resource manager updates the label database to indicate that the target label is in use (Fig. 2, label assignment module 100, see "label assignment indication is stored" recited in column 18 lines 46-59 in Third Embodiment); regarding claim 6, the plurality of switch devices include at least two out of an MPLS switch, a TDM switch, a Lambda switch, and a fiber switch (FIG. 1, outline of present invention, see "MPLS (Multi Protocol Label Switching) and optical switches (optical cross connects OXC)" recited in column 1 lines 9-12 in field of invention and lines 31041 in description of related art) and regarding claim 8, wherein the resource manager manages LSP information of the GMPLS network (Fig. 2, LSP connections, see "label assignment processing module 100", recited in column 6 lines 8-15).

It would have been obvious to one of ordinary skill in the art at the time of Invention to modify the system of Fant et al. with Banks et al. by using the features, as taught by Nomura et al., in order to provide a label database describing whether each of the labels is in use or not, the label request is indicative of a target label, the resource manager updates the label database, plurality of switch devices include MPLS switch

and a fiber switch and resource manager manages LSP information of the GMPLS network. The motivation is to enhance the functionality of the system in a cost effective manner.

7. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fant et al. (US 2004/0076151 A1) in view of Nomura et al. (US 7,133,402 B2).

Fant et al. discloses the following features: regarding claim 10, a GMPLS controller system used in a GMPLS network, comprising a plurality of GMPLS controllers each of which includes (Fig. 1, optical network cloud that is built using a linear topology, see "GMPLS controllers coupled to control plane" recited in paragraph 0023 lines 7-10), a switch controller controlling a switch device (Fig. 1, optical network using a linear topology, see "controller is coupled to the switch" recited in paragraph 0023 lines 10-12 and 0025 lines 1-2) and a resource manager responsive to a label request for managing labels, and for issuing a device setup request (Fig. 1, optical network using a linear topology, see "on obtaining a connection setup request" recited in paragraph 0025 lines 5-13); regarding claim 11, wherein the plurality of switch controllers include interfaces, respectively, and the interfaces uses a same protocol to receive the device setup request (Fig. 1, optical network cloud that is built using a linear topology, see "GMPLS controllers coupled to control plane" recited in paragraph 0023 lines 9-22); regarding claim 12, a GMPLS controller system used in a GMPLS network, comprising a plurality of GMPLS controllers each of which includes (Fig. 1, optical

network cloud that is built using a linear topology, see “GMPLS controllers coupled to control plane” recited in paragraph 0023 lines 7-10), a switch controller controlling a switch device (Fig. 1, optical network using a linear topology, see “controller is coupled to the switch” recited in paragraph 0023 lines 10-12 and 0025 lines 1-2), a resource manager responsive to a label request for managing labels, and for issuing a device setup request (Fig. 1, optical network using a linear topology, see “on obtaining a connection setup request” recited in paragraph 0025 lines 5-13) and wherein the resource manager manages bandwidth information of the GMPLS (Fig. 1, optical network cloud that is built using a linear topology, see “provides high capacity by using optical switching devices” recited in paragraph 0002 lines 1-13 in background); regarding claim 13, a GMPLS controller system used in a GMPLS network, comprising a plurality of GMPLS controllers each of which includes (Fig. 1, optical network cloud that is built using a linear topology, see “GMPLS controllers coupled to control plane” recited in paragraph 0023 lines 7-10), a switch controller controlling a switch device (Fig. 1, optical network using a linear topology, see “controller is coupled to the switch” recited in paragraph 0023 lines 10-12 and 0025 lines 1-2) and a resource manager responsive to a label request for managing labels, and for issuing a device setup request (Fig. 1, optical network using a linear topology, see “on obtaining a connection setup request” recited in paragraph 0025 lines 5-13).

Fant et al. does not disclose the following features: regarding claim 10, wherein the resource managers of the plurality of GMPLS controllers use a same algorithm for issuing the device setup requests; regarding claim 12, wherein the resource managers

of the plurality of GMPLS controllers use a same algorithm for issuing the device setup requests; regarding claim 13, wherein the resource managers of the plurality of GMPLS controllers use a same algorithm for issuing the device setup requests and wherein the resource manager manages LSP information of the GMPLS

Nomura et al. discloses the following features: regarding claim 10, wherein the resource managers of the plurality of GMPLS controllers use a same algorithm for issuing the device setup requests (Fig.2, LSP connections, see "label assignment processing module 100 of the LSR-A generates and determines the label value by the same algorithm" recited in column 12 lines 48-51); regarding claim 12, wherein the resource managers of the plurality of GMPLS controllers use a same algorithm for issuing the device setup requests (Fig.2, LSP connections, see "label assignment processing module 100 of the LSR-A generates and determines the label value by the same algorithm" recited in column 12 lines 48-51) and regarding claim 13, wherein the resource managers of the plurality of GMPLS controllers use a same algorithm for issuing the device setup requests (Fig.2, LSP connections, see "label assignment processing module 100 of the LSR-A generates and determines the label value by the same algorithm" recited in column 12 lines 48-51) and wherein the resource manager manages LSP information of the GMPLS (Fig. 2, LSP connections, see "label assignment processing module 100", recited in column 6 lines 8-15).

It would have been obvious to one of ordinary skill in the art at the time of Invention to modify the system of Fant et al. by using the features, as taught by Nomura et al., in order that the resource managers of the plurality of GMPLS controllers use a

same algorithm for issuing the device setup requests. The motivation is to enhance the functionality of the system in a cost effective manner.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 2-3, 9 and 14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Bokhari whose telephone number is (571) 270-3115. The examiner can normally be reached on Monday through Friday 8:00-17:00 Hrs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang B. Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KWANG BIN YAO  
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Kwong Bin Yao', is written over the printed name and title.